Proposed Revision of
the Dissolved Oxygen Water Quality Objective
for the North Coast Region
Scoping Document

Abstract: The Regional Water Quality Control Board (Regional Board) directed staff in its 2007 Triennial Review of the Water Quality Control Plan for the North Coast Region (Basin Plan) to develop a proposal for the revision of the water quality objectives (objective) for dissolved oxygen (DO) as contained in the Basin Plan. This is a Scoping Document designed to initiate the public scoping process under the California Environmental Quality Act (CEQA). It provides an initial assessment of the issues associated with the existing DO objective and Regional Board staff's preliminary proposal for revising the objectives. Following the scoping process, Regional Board staff will draft a Basin Plan Amendment and Staff Report and the Regional Board will consider public comment prior to the Board's decision regarding adoption of the amendment.

The existing DO objectives were put into effect in 1975 and have remained unchanged since that time. The DO objectives are contained in two places within the Basin Plan: 1) page 3-4.00 under the heading "Dissolved Oxygen" and 2) Table 3-1 on pages 3-6.00 through 3-8.00. The objectives on page 3-4.00 are based on the life cycle requirements of sensitive aquatic species and are applicable throughout the region. These objectives are herein after referred to as the *life cycle DO objectives*. The objectives in Table 3-1 are based on background conditions as measured by extensive regional sampling in the 1950s and 1960s and are applicable in individually named waterbodies. These objectives are herein after referred to as *background DO objectives*. At present, the *background DO objectives* take precedence over the *life cycle DO objectives* for those waterbodies named in Table 3-1 of the Basin Plan.

Revision of the DO objectives is necessary because: 1) the *life cycle DO objectives* are given only as daily minimum requirements and thus allow for multiple, consecutive days of marginal conditions; 2) the *background DO objectives* are based on grab sample data which, in some instances, inaccurately depicts actual background conditions; and 3) the listing of threatened and endangered aquatic species in the region and the specter of global warming call for updated and innovative approaches to water quality regulation.

Staff proposes three fundamental changes to the existing DO objectives. First, the framework of the DO objectives should be reversed so that the *life cycle DO objectives* take precedence over the *background DO objectives*. This is to better ensure that threatened and endangered aquatic species receive the immediate protection they require. Second, the *life cycle DO objectives* should be updated to include weekly average limits so as to better prevent the occurrence of multiple days of marginal conditions. Third, in those waterbodies where natural conditions prevent the attainment of *life cycle objectives*, the existing *background DO objectives* should be updated.

Staff proposes that these revisions apply to both warm and cold freshwater habitat within the region, including habitat used for spawning, reproduction, and/or early development. There appears at present no reason to revise the DO objectives designed to protect marine habitat (MAR) and inland saline water habitat (SAL).